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February 19, 2018

Ms. Carlotta Stauffer, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee FL 32399-0850

Re: Docket No. 20170215-EU – Review of electric utility hurricane preparedness and restoration actions

Dear Ms. Stauffer:

Attached for electronic filing is Gulf Power Company's response to Staff's Third Data Request in Docket 20170215-EU.

Sincerely,

A handwritten signature in blue ink that reads "Rhonda J. Alexander".

Rhonda J. Alexander
Regulatory, Forecasting and Pricing Manager

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Attachments

cc: Gulf Power Company
Jeffrey A. Stone, Esq., General Counsel
Beggs & Lane
Russell Badders, Esq.
Florida Public Service Commission
Wesley Taylor, Office of the General Counsel
Emily Knoblauch, Division of Engineering

1. Please refer to Gulf's responses to question no. 12. Has Gulf storm hardened its facilities serving the local community critical infrastructure facilities that experienced outages? If yes, please describe the hardening efforts. If not, please explain why not.

RESPONSE:

No. Gulf has not specifically hardened the facilities identified in its response. Gulf's response to Item No. 12. in Staff's First Data Request referenced general outages during the major weather events of 2016 – 2017. Therefore, this response will focus on the overall outages outlined in Item No. 12 and the critical infrastructure facility outages outlined in Item No. 35.

The facilities listed that experienced outages are secondary level facilities and not major installations as described above. Gulf continues to invest in storm hardening critical facilities across its distribution system. In fact, since 2007, Gulf has upgraded many lines across all three districts to strengthen the wind loading capabilities of poles to meet NESC Grade B construction standards. These projects have focused on those critical facilities that provide service to hospitals, emergency operation centers, sewer treatment facilities, shelters, first responder locations, major commercial corridors, and similar facilities that benefit the community as a whole during a major restoration effort. Gulf included in its response to Staff's First Data Request Item No. 35 all locations that are internally identified as "critical infrastructure" in its mapping system, which includes much smaller and isolated facilities that its storm teams strive to restore as a priority depending on location and damage. Therefore, in response to whether Gulf has storm hardened its facilities serving the local community critical infrastructure facilities that experienced outages – not at this time.

2. For Washington and Bay counties in Gulf's service territory, please respond to the following questions for Hurricane Irma.
- a. Identify and describe the areas in each county that sustained the most damage.
 - b. When was the last time tree trimming was performed in those high damage areas? How many miles were trimmed during that time?
 - c. Were there any preventive measures that could have been taken before Hurricane Irma impacted those high damage areas?

RESPONSE:

- a. Feeders experiencing the most interruptions in Bay and Washington counties during Hurricane Irma are listed in the table below. These feeders comprise 80 percent and 100 percent of the customer interruptions, respectively. Based on this data and known equipment failures, Gulf would not define these areas as heavily damaged by Hurricane Irma. Some minor equipment and conductor damage occurred during the storm.

Most Damaged Feeders in Bay County During Hurricane Irma						
Feeder	Substation	Customer Interruptions	Total Customers Served	Overhead Miles	Underground Miles	Sectionalizing Devices
8812	Northside	1,323	3,075	21	12	2
8432	Greenwood	963	1,673	15	1	2
8602	Highland City	397	2,855	25	20	3
8732	Redwood	247	2,362	22	2	7
8362	Lullwater	223	2,982	18	13	4

Most Damaged Feeders in Washington County During Hurricane Irma						
Feeder	Substation	Customer Interruptions	Total Customers Served	Overhead Miles	Underground Miles	Sectionalizing Devices
9522	Vernon	1,518	1,723	171	5	7
9212	Chipley	543	1,648	85	2	1
9202	Chipley	229	704	37	1	4
9222	Chipley	109	1,035	27	2	6

- b. The areas impacted by Hurricane Irma received minimal tree damaged outages as typically seen with this type of weather event.

Most Damaged Feeders in Bay County During Hurricane Irma					
Feeder	Substation	Mainline Last Trimmed	Mainline Miles Trimmed	Lateral Lines Last Trimmed	Lateral Miles Trimmed
8812	Northside	02/2017	1.08	01/2014	15.10
8432	Greenwood	02/2015	1.68	09/2014	10.50
8602	Highland City	06/2017	3.29	02/2012	8.40
8732	Redwood	05/2017	3.66	05/2014	21.00
8362	Lullwater	01/2016	2.52	10/2013	17.80

Most Damaged Feeders in Washington County During Hurricane Irma					
Feeder	Substation	Mainline Last Trimmed	Mainline Miles Trimmed	Lateral Lines Last Trimmed	Lateral Miles Trimmed
9522	Vernon	06/2017	15.11	09/2017	52.04
9212	Chipley	05/2015	1.61	01/2018	81.18
9202	Chipley	05/2015	1.82	10/2015	13.20
9222	Chipley	03/2015	4.23	09/2013	21.20

- c. Gulf did not experience any outages during Irma that it would consider preventable. Gulf has made significant efforts in hardening the mainline feeders and critical infrastructure, and the hardening of feeder laterals and other infrastructure will be needed. The ability to prevent outages during a major weather event will be an ongoing challenge that is magnified by the very unpredictable variables associated with a storm.

3. Please provide the following information for an instance where storm hardened structures incurred damage and required repair or replacement due to Hurricane Irma.
 - a. A description of the damage incurred (i.e. broken pole, displaced underground vault, etc.).
 - b. A description of repair process, including a description of any temporary repairs that required a follow-up trip.
 - c. A description of the repair process if the facilities had not been hardened.

RESPONSE:

- a. As noted in Gulf's response to Staff's First Data Request, Item No. 29, Gulf did not determine that any storm-hardened facilities were damaged during Hurricane Irma.

Facilities damaged during Hurricane Irma were limited to lateral lines and overhead service lines. Gulf's primary focus for storm hardening has been mainline feeders that benefit and prevent outages for larger numbers of customers and critical facilities.

- b. When lateral conductors are damaged as described above, the outage will roll up to the first protective device ahead of the damage and de-energize that portion of the line. Crews typically begin restoration work at the substation and work outages as they move further away from the substation unless dispatched directly to an outage area. Once the cause of the outage has been determined, the line crews will make a determination to repair or replace the damaged equipment. This decision is based on many factors, including training and experience. Generally, temporary repairs are discouraged, unless a permanent repair will be time consuming and require additional manpower and equipment. An example would be a damaged electronic recloser, and in this case the equipment would be taken out of service, bypassed, and a work order generated for replacement of the equipment following restoration.
- c. Storm hardening mainly focuses on the wind loading of poles, which is engineered at the time of initial construction or replacement. During a restoration effort, damaged poles would be replaced with a "like" pole size or larger depending on availability of materials. This means that previously storm hardened facilities would be reconstructed under similar specifications. Non-storm hardened facilities would likewise be constructed at the current existing standard with all new equipment, or possibly a stronger pole depending on material availability. During a major restoration effort, there would not be time or personnel available to re-engineer every pole replacement to meet storm hardening standards.

4. In Order No. PSC-06-0351-PAA-EI, the Commission ordered Florida's investor-owned utilities to file plans for Ten Storm Preparedness Initiatives. The Ten Initiatives are:
- Three-Year Vegetation Management Cycle for Distribution Circuits
 - Audit of Joint-Use Agreements
 - Six-Year Transmission Inspections
 - Hardening of Existing Transmission Structures
 - Transmission and Distribution Geographic Information System
 - Post-Storm Data Collection and Forensic Analysis
 - Collection of Detailed Outage Data Differentiating Between the Reliability Performance of Overhead and Underground Systems
 - Increased Utility Coordination with Local Governments
 - Collaborative Research on Effects of Hurricane Winds and Storm Surge
 - A Natural Disaster Preparedness and Recovery Program

Please provide suggested improvements, if any, to the Ten Initiatives, including modifications to existing initiatives and/or possible alternatives, based on lessons learned.

RESPONSE:

1. Vegetation Management Cycle – Gulf does not have any recommended changes to the approved 3-year cycle mainline program and 4-year cycle lateral program.
2. Joint-Use Audit – Gulf has not identified any suggested improvements to the 5-year Joint-Use Attachment audit that includes all attachment partners.
3. Six-Year Transmission Inspections – Gulf does not have any recommended changes to the existing transmission inspection program, but continues to look for opportunities to bring efficiency to the process based on data and experience.
4. Hardening of Existing Transmission Structures – Gulf is scheduled to complete the hardening of existing transmission structures in 2018 and does not have any suggested improvements to the existing program.
5. Transmission and Distribution GIS – The GIS systems are now a critical aspect of day to day operations. Gulf has fully implemented systems that continue to be upgraded to meet the business needs of the operational teams. Gulf believes there is no longer a need for Transmission and Distribution GIS to be included as part of the Storm Hardening Plan.

6. Post-Storm Forensic Analysis – Since the beginning of the initiative, Gulf has not experienced a hurricane or major damage that would produce valuable forensic information. Gulf has run drills, tested with select vendors, and prepared for the collection of forensic data when storms have threatened the area. Depending on the size and scope of a storm event, the available forensic data may not provide meaningful analysis to support investment decisions. Gulf has made and will make every effort to collect damage data, even limited data to determine hardening feasibility. Gulf does not have any suggestions for improvement at this time.
7. Collection of Overhead and Underground Data – Gulf continues to collect data on the distribution system, both overhead and underground. To this point, there has been very little learned from the data outside of the common trends. Gulf does not have any suggestions for improvement.
8. Increased Utility Coordination with Local Governments – Coordination and communication with local governmental agencies and offices is a part of normal business. Having this outlined in the storm hardening plan initiatives has not changed Gulf Power's business model or interaction with these critical groups. Given that these activities are a part of the daily support of its customers, Gulf does not have any suggestions for improvement.
9. Collaborative Research – Gulf has and will continue to engage in research projects associated with storm damage prediction, prevention, and recovery. Gulf utilizes and benefits from the work of numerous organizations such as Southern Company, Southeast Electric Exchange (SEE), Public Utility Research Center (PURC), Edison Electric Institute (EEI), Electric Power Research Institute (EPRI) and others. While a part of preparing for the future and changing industry, Gulf does not have any improvement suggestions to provide.
10. Disaster Preparedness and Recovery Program – Gulf has a well-established and tested recovery plan that is reviewed and updated on an annual basis. Gulf's Storm Restoration Manual is a flexible framework that will allow leadership, employees, and outside assistance to respond to any circumstance that creates an interruption in continuity of service. Gulf continues to refine the process and documentation, and does not have any suggested improvements at this time.

5. Please provide suggested improvements, if any, to the 8-year wooden pole inspection program, including modifications to the existing program and/or possible alternatives, based on lessons learned.

RESPONSE:

Gulf is currently in its third term of the 8-year wooden pole inspection program. Going into the current program in 2007, Gulf made several minor adjustments to the existing program based on best practices and experiences. The program is well established, and Gulf does not have any suggested modifications at this time. In 2011, the telecommunication utilities became exempt from the inspection requirement. That year, the Florida Legislature amended Chapter 364, F.S. which governs telecommunication companies and eliminated inspection regulations. It is important to note that while Gulf has a well-established pole ownership inspection program, there are many third-party owned poles that Gulf attaches to that may not have inspection programs. The lack of such an inspection and replacement program could affect the reliability of service to Gulf's customers even during minor weather events. Over 20 percent of Gulf's distribution system is located on non-Gulf owned poles.

6. Please provide suggested improvements, if any, to the electric infrastructure storm hardening plan filed pursuant to Rule 25-6.0342, F.A.C., including modifications to the existing rule and/or possible alternatives, based on lessons learned.

RESPONSE:

Gulf does not have any suggestions for improvement to Rule 25-6.0342, F.A.C.

7. Assuming Gulf decreased its feeder vegetation cycle from its current 3 year cycle to a 2 year cycle, please provide the following:
 - a. Additional cost per year.
 - b. Incremental benefits (e.g. reduced number of outages)

RESPONSE:

- a. Additional cost per year would average \$700,000.
- b. Gulf does not see any incremental benefits to shortening the current 3-year mainline feeder trimming program. The current 3-year trim program with the associated inspection program of the remaining miles continues to produce high reliability value to its customers.

8. Assuming Gulf decreased its lateral vegetation cycle from its current 4 year cycle to a 3 year cycle, please provide the following:
 - c. Additional cost per year
 - d. Incremental benefits (e.g. reduced number of outages)

RESPONSE:

- a. Additional cost per year would average \$3,200,000.
- b. Gulf does not see an overall benefit to the customer base in increasing the scheduled 4-year trim on feeder laterals. Gulf's reliability-based trim associated with the 4-year target has allowed the company flexibility as conditions change. Added annual target miles would put an additional strain on vegetation management resources that have been limited in recent years, especially during storm season when other utilities make requests.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: Review of electric utility hurricane)
preparedness and restoration actions)
_____)

Docket No.: 20170215-EU

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the foregoing was furnished by electronic mail this 19th day of February, 2018 to the following:

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